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To "Clement \(ATSDR/DRO\) Welsh" <cqw9@cdc.gov>

cc "FARRER David G" <David.G.Farrer@state.or.us>, Marcia Bailey/R10/USEPA/US@EPA

Subject RE: PCB poster

Clem –

Dave and I have discussed the issue, and we've figured out the problem. You were right – it has to do with the conversion from ug/kg-lipid to ug/L. We used a lipid content of 4% for the EPA model, and your conversion factor is equivalent to a lipid content of 5.6 or 5.7%. If we use the same lipid content starting from the concentration in ug/kg-lipid, we will end up with the expected ratio of about 1.5. However, and this is a big However, we now realize this is an inappropriate comparison for two reasons. 1) We really need to be using the same conversion factor from ug/kg-lipid to ug/L because this is not an inherent part of either model. This will need to be revised on both posters. 2) As we discussed in the call today, we need to compare results for the same time period, either at six months, or at three months (approximately a six-month average).

I've attached another spreadsheet that includes the eight subjects and the high ingestion rate, with calculations for initial, three-month, and six-month concentrations. If you change the percent lipid (Fthree) from 0.04 to 0.056, you will see the concentrations change to what you might have expected. But we think it is more appropriate to use Fthree = 0.04 for both of our calculations. On your Figure 4, that means the EPA-calculated value of 180 ug/L is correct as a 6-month final concentration for no-intervention. This means the two models are much closer than we had previously thought. On Figure 4, the EPA values are:

No intervention = 180 ug/L

15-year intervention = 96 ug/L

2-year intervention = 18 ug/L

Dave will still need to revise his poster. Please send him your calculated values at 3-months for the individual subjects. Units of ug/L will be OK. We'll plan on converting using the 0.04 factor.

I'm sure it will be helpful if we have a chance to discuss this issue. We'll plan to call you on Thursday morning at 7:30 our time (10:30 EDT) if that is OK.

- Mike BF exposure and risk Oct 2009 B.xls